

ABSTRACT

A system (1) for damping thermo-acoustic instability in a combustor device (2) for a gas turbine, the combustor  
5 device including at least one combustion chamber (4), in particular of an annular type, and at least one burner (7) associated to said combustion chamber and mounted in a position corresponding to a front portion (8) set upstream of the combustion chamber; the damping system including at  
10 least one Helmholtz resonator (12) including a casing (13) defining inside it a pre-set volume and a neck for hydraulic connection between said pre-set volume and said combustion chamber, said neck being connected to one side of said combustion chamber at a distance from said front  
15 upstream portion thereof provided with said at least one burner. The casing of the resonator includes means for varying the aforesaid pre-set volume within a pre-set range and means for delivery of a cooling fluid.